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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,444	06/23/2003	Michael L. Brundage	MSFT-1753/301638.1	7697
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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103			EXAMINER GORTAYO, DANGELINO N	
			ART UNIT	PAPER NUMBER
			2168	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/601,444	Applicant(s) BRUNDAGE ET AL.	
	Examiner Dangelino N. Gortayo	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/23/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/1/03 10/6/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-23 are pending.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/1/03, 10/6/03, 3/16/05 have been considered by the examiner. See attached PTO-1449.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-8, 10-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kiernan et al. ("Kiernan" US# 6,934,712 B2).

As per claim 1, Kiernan teaches “method for semantic representation of one or more XML language inquiries across relational and non-relational data sources” (see Abstract)

“receiving at least one inquiry” (column 3 lines 56-58);

“defining at least one node object for every operation within the at least one received inquiry” (column 14 lines 38-46 wherein the query is converted to a language neutral intermediate representation and is analogous);

“translating each of the at least one node objects using operators” (column 14 lines 47-60 wherein the intermediate representation is translated into an SQL query and a tagger graph);

“generating a semantic representation from the operators” (column 14 line 61 – column 15 line 5 wherein the “tagger graph” is outputted, where each node of the graph represents an operator);

“the semantic representation explicitly describes a meaning of the one or more XML language inquiries” (column 10 lines 1-32 wherein the “tagger graph” presents operators from the XML queries to perform functions on the input).

As per claim 2, Kiernan teaches “the semantic representation is an intermediate language representation formed for interpretation and execution by a target query engine” (column 7 lines 59-64 wherein the tagger graph stems from the intermediate representation to execute the input)

As per claim 3, Kiernan teaches “wherein the non-relational data sources comprise one or more of a text document, a spreadsheet, and a non-relational database” (column 15 lines 15-22).

As per claim 4, Kiernan teaches “the generating step further comprises breaking down high level operations of the received inquiry into explicit parts” (column 12 lines 14-31 wherein generating the tagger graph involves structuring the results using a relational engine and is synonymous).

As per claim 5, Kiernan teaches “the explicit parts are common across multiple XML languages” (column 12 lines 14-31 wherein the explicit parts stem from SQL, which can be used by multiple XML languages).

As per claim 6, Kiernan teaches “the operators comprise one or more of special operators, data sources, literals, Boolean operators, sequence operators, arithmetic operators, string operators, value comparison operators, node comparison operators, tuple spaces, function definition and invocation, XML navigation, XML construction, XML property accessors, type operators, language specific operators, and data manipulation operators” (column 5 line 64 – column 25 wherein sequence operators, XML navigation, and XML construction operators are used).

As per claim 7, Kiernan teaches “forming a graph data structure of the at least one node object” (column 2 lines 54-61 wherein the tagger graph is composed of nodes holding operators).

As per claim 8, Kiernan teaches “at least one received inquiry comprises one or more of an XML query language and an XML view definition language” (column 5 lines 17-28 wherein XML queries is defined using the XML-QL language).

As per claim 10, Kiernan teaches “the semantic language representation allows XML queries over XML views of relational data” (column 13 lines 43-53 wherein the tagger operators in the tagger graph can be used to generate XML output and is equivalent).

As per claim 11, Kiernan teaches “semantics interpreter for expressing a meaning of one or more of an XML query and an XML view across multiple data source” (see Abstract);

“an input for receiving the one or more of an XML query and an XML view which form an inquiry” (column 4 lines 9-23);

“a graph structure generator for defining node objects for every operation within the inquiry” (column 5 lines 5-7 wherein the “rewrite engine” is synonymous);

“a translator for assigning operators for each node object wherein the operators break down operations of the inquiry into explicit parts” (column 5 lines 8-11 wherein a “translator” is equivalent);

“output for providing the explicit parts as an intermediate language representation for expressing the meaning of the one or more of an XML query and an XML view” (column 5 lines 12-16 wherein the combination of SQL queries and tagger instructions shows the output).

As per claim 12, Kiernan teaches "the multiple data sources comprise relational and non-relational data sources" (column 3 lines 51-54 and column 15 lines 15-18)

As per claim 13, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.

As per claim 14, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 6 and is similarly rejected.

As per claim 15, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 5 and is similarly rejected.

As per claim 16, Kiernan teaches "the intermediate language representation is formed for interpretation and execution by a target query engine" (column 7 lines 59-64 wherein the tagger graph stems from the intermediate representation to execute the input).

As per claim 17, Kiernan teaches "A computer-readable medium having computer-executable instructions for performing a method of intermediate language representation of a received inquiry" (column 4 lines 34-40);

"receiving one or more of an XML query and an XML view forming the received inquiry" (column 3 lines 56-58);

"defining node objects for every operation within the received inquiry" (column 14 lines 38-46);

"translating each node using operators which break down operations of the received inquiry into explicit parts" (column 14 lines 47-60 wherein the intermediate

representation is translated into an SQL query and a tagger graph containing explicit parts);

“generating instructions corresponding to the explicit parts forming an intermediate language representation for subsequent queries over one or more of relational and non-relational data sources” (column 7 lines 32-45 wherein the SQL queries resulting from the translation is instructions that are part of the intermediate language representation).

As per claim 18, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 6 and is similarly rejected.

As per claim 19, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 5 and is similarly rejected.

As per claim 20, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 8 and is similarly rejected.

As per claim 21, Kiernan teaches “A computer system for generating a semantic representation of an inquiry” (column 4 lines 24-33);

“a processor for executing computer instructions and at least one module” (column 4 lines 9-23);

“an input function for receiving one or more of an XML query and an XML view which forms the inquiry” (column 4 lines 9-23);

“a graph structure generator for defining node objects for every operation within the inquiry” (column 5 lines 5-7 wherein the “rewrite engine” is synonymous);

“a translator function for assigning operators for each node object wherein the operators break down operations of the inquiry into explicit parts” (column 5 lines 8-11 wherein a “translator” is equivalent);

“an output for providing the explicit parts as an intermediate language representation for expressing a meaning of the XML query and the XML view” (column 5 lines 12-16 wherein the combination of SQL queries and tagger instructions shows the output);

“wherein the at least one module comprises one or more of one or more software modules and one or more hardware modules” (column 4 lines 34-40)

As per claim 22, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 6 and is similarly rejected.

As per claim 23, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 5 and is similarly rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiernan et al. ("Kiernan" US# 6,934,712 B2) in view of Marron et al. ("Marron" US # 6,901,410).

As per claim 9, Kiernan teaches "at least one received inquiry" (column 3 lines 56-58).

Kiernan does not expressly disclose "comprises one or more of an XPath, an XSLT, an XQuery, a DML, an OPath, and an Annotated Schema inquiry".

Marron discloses "comprises one or more of an XPath, an XSLT, an XQuery, a DML, an OPath, and an Annotated Schema inquiry" (column 3 lines 61-67 wherein the query inputted into the system is an Xpath query, and can be many other query languages).

It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Kiernan's method to translate and output XML queries with Marron's ability to process XPath queries. This gives the user the advantage of being able to use XPath queries, as well as other query languages, with Kiernan's system of processing and outputting queries. The motivation for doing so would be to improve and optimize the performance of data retrieval using XML queries.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Carey et al. (US# 6,947,945 B1)

Orster et al. (US# 6,601,058 B2)

Mani et al. (US# 6,654,734 B1)

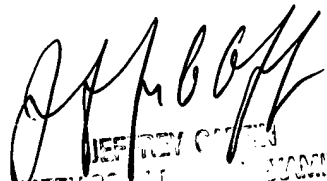
Bhatt et al. (US# 6,799,184 B2)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dangelino N. Gortayo whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571)272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dangelino N. Gortayo
Examiner



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